RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:	/0/53/35/
Source:	IFWP,
Date Processed by STIC:	8/11/06
-	7/

ENTERED



IFWP

RAW SEQUENCE LISTING DATE: 08/11/2006
PATENT APPLICATION: US/10/531,351 TIME: 10:56:00

Input Set : N:\RJAVED\10531351.txt

Output Set: N:\CRF4\08112006\J531351.raw

```
3 <110> APPLICANT: University of Florida and Centre de Coopiration Internationale
              en Recherche Agronomique pour le Diveloppement (CIRAD)
      6 <120> TITLE OF INVENTION: Complete Biosynthetic Gene Set for Synthesis of Polyketide
Antibiotics,
      7
              Including
      8
              the Albicidin Family, Resistance Genes, and Uses Thereof
     10 <130> FILE REFERENCE: UF-398XC1
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/531,351
C--> 12 <141> CURRENT FILING DATE: 2005-04-15
     12 <150> PRIOR APPLICATION NUMBER: US 60/419,463
     13 <151> PRIOR FILING DATE: 2002-10-18
     15 <160> NUMBER OF SEQ ID NOS: 54
     17 <170> SOFTWARE: PatentIn version 3.1
     19 <210> SEQ ID NO: 1
     20 <211> LENGTH: 55839
     21 <212> TYPE: DNA
     22 <213> ORGANISM: Xanthomonas albilineans
     24 <400> SEQUENCE: 1
     25 gaattettte gecattgeee gggattgatg actggeateg ggattgtegg gaeettetet
                                                                               60
     26 ggcttgttgc tcggtctgca tcagttcgcg gatgctatcg cgccgaaggc caccgcgttg
                                                                              120
     27 getaeteegg tgeggeagat tggagegatg ggacatgeac cegetagege ggecagtgeg
                                                                              180
     28 cegatgactg geggggtgtt egtetetttt teegeaaege eggtgegatt geeegeggta
                                                                              240
     29 acaggcatga aggtteteaa tgagggeeat gaeggeatgg egggegegge tateaeteat
                                                                              300
     30 geggeggtaa aaceggtgat ggetecattg acaggggaca tgttgacagg egegttgage
                                                                              360
     31 tgcctgctgc acagcgtgtc gggcgctttc ctcgtttcgg ccattgcggt gttgtgcgcg
                                                                              420
     32 cttttgacca cgttcgtcga aaagttacta gtggcgcaat gctttcatca gcttcaggaa
                                                                              480
     33 ctgtcgtcga cgattgaccg actgttcgca tttaatcctg gcgacgatcc gatgatgcgt
                                                                              540
     34 ttgacgttga cgtcggaatc gacagagcgg ctaatcaagc ggatcgcgct tgcattagac
                                                                              600
     35 gacattgcaa tttcgcgaga tcaagttcag tgagatttta tcgatacgga tttcctgtgc
                                                                              660
     36 ggcgtgacgt cgagcgtggc caggaagaaa gccccttctg gatttcgctg tcagacatga
                                                                              720
     37 tgaccggcat gaccgcgctt tttctggtgc tggcctgcag catgctgcta atgcgcatca
                                                                              780
     38 ccgaatcgaa atcgcccagt ggaacgtcgc ccagcgacga gaaagtcgtt gataccgccg
                                                                              840
    39 cgccgacgca gcgcaacgag cgttccgtgg gtgcggcagt gaacgcttcg catgatgcga
                                                                              900
     40 accgacttgc tacctacgaa tcggatattt ccaccgtgtt gaaaaatata tcggcgttat
                                                                              960
     41 cgcagaaata cggattttcg gtcgatgcta ccactaacac gatcgatctc ggccagtcgg
                                                                             1020
     42 ggctattccc gcttggaagc gaccgcttga gcgcgacaca ggaaaggttg ctgcgcaatt
                                                                             1080
     43 atgtcgccga tctcatcgca ctgactcaga acgatccggc catggcacca ttgaagagca
                                                                             1140
    44 tcaccgtggt cggctataca gatccggctg ggtcgtatct gttcaatctc gatctgagtg
                                                                             1200
    45 cgcgccgcag cgaacgcctg atgtgcgtgc tacttgccac gctggaaaaa cagagtagca
                                                                             1260
    46 cgacaggtgc accgacgatg accgaggact cgctgcagac catccggcac ctgttcaggg
                                                                             1320
    47 ttggcggcta ttccgccgac gcacagaagg aaagtgccgc agcaagcagg cgattagcgt
                                                                             1380
    48 tgaagetgga tttttacaag ategaegage ceeggeggea ageegetgtg ettqeqatqe
                                                                             1440
    49 cggtcgggtc gtgcgcgctt qgatcqcqtt aqqqaaggtc tqaataaccc cctccccaqt
                                                                             1500
    50 aatgcaattt attgatttta taggtgtgaa taagagcgga taacaaaaca tagcgagcga
                                                                             1560
```

Input Set : N:\RJAVED\10531351.txt

Output Set: N:\CRF4\08112006\J531351.raw

51	ctctcaggcg	taccgcgcag	cacgcaggaa	ccggtgtgta	cgagtggtac	ataaggaatc	1620
			ctggcggaca				1680
			atcactaaca				1740
54	ttgcgccgtg	cgcgctgccg	gatgtctggc	gtcatgccgc	cgaaggcaag	accgtcgcct	1800
			ctgctgtggc				1860
			ccgttttcga				1920
			cgtgtccggt				1980
58	tgcgcgaggt	gtatcagcag	ttattcccgg	agcctgacga	tgcaacccgg	ataacggcat	2040
59	gcatggcgtg	cgaacaggaa	gctgaggcat	cgatctgctt	cgtcgtgcca	gctgtgattg	2100
60	cctgcatgcg	cgaagccagg	cgcttgggga	tgaccattat	cgtcgtcagc	gatacctatt	2160
61	ttaacgctgg	ccagctgcgt	gcactcattg	cgtcagtgtc	gcccgaagcc	gacgagctgg	2220
62	tcgaccggat	cttctgctct	tccgactatc	ggaccatgaa	gaagtaccag	ctatggcacc	2280
63	gcgtgctcga	cgaactgtac	gcagcacctg	aaacaatcgt	gcatttaggc	gacaatcgcg	2340
64	tcgccgacat	actaatgccg	tcgaagctgg	gcatcgcgtg	cctgtggcta	gatcggtatg	2400
			ttgcgccgac				2460
			gtgtggacac				2520
			gatgaactcg				2580
			gacgaatttg				2640
			atgcgcgatg				2700
			ccgtcattgc				2760
			attctgcatt				2820
			gtctgtctac				2880
			gaagacacag				2940
			acgcgttcga				3000
			aagcgcggcg				3060
			ctgcatgatg				3120
			cggcagaacc				3180
			cacggactga				3240
			ggtgctggcg				3300
			atggtctgcc				3360
			caggtttgcg				3420
			tccgcattga				3480
			atcagtcaga				3540
			ccagaaaaag				3600
			gagtttcgga				3660
			tacatggcgt				3720
			attacattgc				3780
			catgcgacat				3840
			gttgaaatcg				3900
			gaggcgtacg				3960
			tatatatttg				4020
			gtaatgacgt				4080
			cctataaccc				4140
			gccgtcaacg				4200
			tatgcggcgc				4260
			tataccggat				4320
			gtatttcacg				4380
			tatacgacca				4440
99	cgggtgagtt	ggagtggacc	aacaacgttt	atccgcgtcc	ctatggccct	tccgttgacg	4500

Input Set : N:\RJAVED\10531351.txt
Output Set: N:\CRF4\08112006\J531351.raw

100 attgggtgga tgaacgcgat agggtgccaa aagagcggcg tgtcaaagac gattatcgcc 4560 101 atccccggtt ttttgccaaa cccaccacga gcgcggcagt ggaggagtgc aggccggctt 4620 102 egggegtegt geageaggeg eggeggetgg acaatgegag egegageeet ettttegetg 4680 103 caagegeggt gegaegagga atceggtegt gtgteeegte qaatetgeea eegagtgteg 4740 4800 104 ccgtgggcca taggctagca ggaccattgg catctgagta tattcaaaac tcatgcttgc 105 tcgtcaatcg gcctgcaagt acgtttgtaa cgttagggag tcgtgttacg gcagggcatg 4860 106 ccctategga categecage ggtgeagaeg egaceaaceg ceegegeaac gtgaaaggea 4920 107 aacatgaaaa agacgacatg acccaacggg gccaacataa tgcaggcggt cttgtggcga 4980 108 gaatcaagge gaatattegg aattatateg atgeaaagtt aegeeggtat eetgeaagte 5040 109 ggacttgagc tgataaatga tgaacgcggt gattcctgta attaaaattc ttaccactga 5100 110 tgtcactggg ataaattttt cccatcctcc cactttcgca cagaacggga agactttgaa 5160 111 tagactetta gaacteetge geetaceact teaaacggag ttttegactg egegagatge 5220 112 taccgcgtct ggctcgcgcc atgatgctgc accaagctca tgcgcagccg gtcttgcgga 5280 113 tggccagtaa ttttcatagc cgagaatatt tactaataaa taacataata gcactatctc 5340 114 atcgccatca tcagaataga tgatcgattt tatttattaa caaggtaatt atatatgttg 5400 115 caatacgttg gagaaatttg tgccccacat aatttaagtt atggaaaaaa tatagattcc 5460 116 tcaagaaata gaatagagat tgaaggtaat gtaaaaattc ccaggcctaa attatgcaat 5520 117 gaaattgcag ccgttttcag cgcagatcag gccataaatg caaatatgaa aattttgcaa 5580 118 aaatgegatt ttggacaate taegtetgat aettttagaa aaaaatettt ttttaaeeat 5640 119 gctagtaatc tagtggggaa aacaatacat ccccaagttg cagatcgctt tcgctcggaa 5700 120 gtttcctttg atggaacggg taaaataatt ggattcaaaa aggaaatttc aaataataaa 5760 121 tttgattttc taataaaaaa ttgcattcat tctattaatg agactccgca tttaatagaa 5820 122 aataagatta gaacccctgg ggagtgetta ataaatattg ccatctetet tgacagtgte 5880 123 atgccaccaa tcccgcttaa ggatgaaatt caagcgacta taagatatac ttggcttgat 5940 124 ggtggcttgt cgcgtcaagc ccttgtaaat ttaatcgagc ttatcaagtt gagaaccagg 6000 125 tttaatgcgc ctgaattata tccaaaaata agaaggaaaa ttgacgatat tgctggaact 6060 126 ttggagaaag aaaccttcca gacgaaacgg aatgacaatt tctatggtcg cctttttgaa 6120 127 acgcatttat cagaatattt aataaaaaat cctgattatg cgatgatgga ggtccgtgat 6180 128 gcagtggctg catttatttt gcaagacttc atatctccac ttttaacgtg caaagggaat 6240 129 gaagaatcgc aatctgcaat ttgtgaaagg ctagcttctc ttatggaaga tgaccctcct 6300 130 tcttggcggt gcaatattga atcagttaag aaatttcttg cctctaagag tcaagctgac 6360 131 tttatagaaa tgatgaaata tcatggcgaa ttttctgtgc cattgattct ttcgatagca 6420 132 gtgaaatata ttactatcgc gccaggattg caagagctta aaaataaagc gagtgaattt 6480 133 tatattgaaa aaatcattcc gcaacgcaag cttcgcaatc ttatattaag taataatgct 6540 134 cataataaaa aatccaacct ttatggtttg atgcttccat atcaacgtgg agcaaatgca 6600 135 ggctattcca tgagtggcgg gatcggcatc aggcctattg atcgttatgc actccctggc 6660 136 gtggaagatg gtatgcatga ggatgatctg gtagcgtcat ccaatgagat aaccattgcg 6720 137 actggagttt ctggctcatc aaatattctt aattttcttt tcaataaaat tcgaaaaaca 6780 138 tcaacgaatt ttcctatgga tgccgggaga ttggccgtgg cctcttggct tgcttatagt 6840 139 ggagggcact cttttaatga agcttattct gtattctcgt acaaaaacgc agggaaattt 6900 140 aaatcaatct cttttaagag tttagctgaa gactatgatt tgatgaataa aggtgtggag 6960 141 catgcataca atcaagtact acagacagcc aaacgtttac agaaaccggg gtccgggcaa 7020 142 ctgcccccc atgtcagagt gtcagcctcc cgtaaaattg atccagccat agctagaggt 7080 143 ctccgtgcgc actagccacc gaggcgacca acaatgcgca agagcaagtt caccgagagc 7140 144 cagatcgtcg ccacgctgaa gcaggtggag ggcggtcgcc aggtcaagga tgtatgccgt 7200 145 gagetgggea tttecgagge gaegtaettg etetteeact ggtaataggt egeegtgetg 7260 146 atgccgactt ggcgacagat gtctttgact ggaacgcctg cgtcggcctg cttgagcgtg 7320 147 gcgatgatct gtgtctcgtt gaacttcgat gtgcgcatgg aacctcctga cttgggaacg 7380 148 atgccagaaa gatctactta tgcggtgtct gcggatcggg ggagcttacg catccagcct 7440

Input Set : N:\RJAVED\10531351.txt
Output Set: N:\CRF4\08112006\J531351.raw

7500 149 gggtaagtcg cagcagaaga gaagcctaca tcgagaacag tacgttatgc ctagtggttt 150 ggttcggccc ttgtttgaca cgatcagccg ctaggaaccg ccgccatctg ggttcgccgc 7560 151 ataageetae tittegatea gtaegteate gatgaacate gegteeagae egetggtgaa 7620 152 gaagategae agegeateet ceaetgaatg ggegateggt ttgeecatga egttgaaget 7680 153 ggtgttaagc accaggggaa tacccgtcag gcggtagaat tctttgatca gggcgtgata 7740 154 gegegggtte caatgttget teacegtetg cagaegteeg gtgeegtegt ggtgeacgae 7800 155 geoeggeace ttgegegtgg etteegeacg gaactteagg gtgegeteea tgtagggega 7860 7920 156 ttcctggtac agctcgaaat actccgcgcc gtgctcatgc aaaatcgacg gtgcgaacgg 157 geggaactee tegeggaact teaceegege attgatgatg teettgateg eaggegaacg 7980 158 cggatctgca aggatcgagc gattgcctag ggcccgtggc ccgaattccg cgcggccttg 8040 159 cacceaggeg acgatettae ceteggteag cageegggee gegegttgtg etgegtegte 8100 160 gaggcaacga gtgaatttgg atagcgcgcc gaagcgctcc acgttatgca aggtctccgc 8160 161 actuatgetg etgeceaggt agggegattg ttegegegea geeggeggtg tetgeteagg 8220 8280 162 atggtcctcg gcgtgtgccc ataatgcggc gcccaccgcg ttaccgtcat cgccaggggc 163 ggcgaatacg tgcagatgac ggaacggagt ttcagccagc acgcggccgt tagccgagga 8340 164 attgagtgca cagccgccgc ccagcaccaa gtggtcggac aagcccaaag cgtgcaggtt 8400 165 gtgcaggaat tcgaagagga cgtcgcagaa cacctgctgg ccggcatagg ccaggttggc 8460 166 caattcgatc gttggctggc ccttgcatcg gcgcattgca tacagcgtgc gctgcaactg 8520 167 gctgaattgt gctgcgggcg caaacctcag cgttaggccg tcgacgcgta gcatctggcg 8580 168 caacaacteg tacagttgcc gatcatgttg cccgtaggcg gccaggccca tcaccttcca 8640 8700 169 ttettegeeg gacagggtge egaageegea aacetegeag ateatacegt agaagaagee 170 caggetggec caactgetgg tetegetttg gtggategge gtaagettge cetgttggta 8760 171 gtggtagcag gccaaagcat ttttttcacc catgccgtcc agtactgcgc acaccgcctc 8820 172 ctcgaacggg ctggtgtagc agccggccac cgcgtgggtt aggtggtgct cgtaatgacg 8880 173 gtagctgggt ggcttgaagg caggctcggc catgtggctc aagtcatatt cgagcaggtg 8940 9000 174 teeggggtge tecaceateg ecagetgega aeggtagaag aagetetgtg ceaegaattg 175 cttgttgacg tgccaaggca ggtcgccgaa ggcgctgcgg tattggtcta ccgcttgcgc 9060 176 ggtcttgccc aggccctccc gcatcagttc aggtgtttgc ccgctccaac tagtagcgac 9120 177 gaccagttcg gcgccgggat cgccgtattc gtggaccagc ttgatggcgc gctgaaacac 9180 9240 178 gtccggggca acgccgattg aacgcttgta ctgcaggtag cgctcggtgg cctcggcaaa 9300 179 gcgcacctga ccatcgtcgc cgacgatagc gatggctgaa tcgtggaagg aattggcgag 180 tecgatgtaa gtgegettea tgteegatte eagtgaaggg gaegatggat getteeggat 9360 9420 181 gcctacggcg atgattgtgg cgcaaattgt gtcagtttga actgcaatcc cagcgtagag 182 agegecacga aageattgge egegatgtag tacaccaceg tageceegaa ggeetgettg 9480 9540 183 aaagccagag ctacgcctgc cggcccctgc agatgctggt gcaggccgct aaagaaaatt 9600 184 teegagacea gggegatgee cageataceg eegacetget ggatgacetg cagegegeeg 9660 185 gaacetgege eggeateett cagaggtace gtacgeatea etgtetggaa tagegaggeg 186 atggtgatgc cacagcccag tccgccgatc agcaacggca gggtaagcgt ccagggatcc 9720 187 agcgagcctt cactgcgcgt gatgatgacc cacaaggcca gatagctagc gatcatcaga 9780 188 caggegeege tgaagatttt egegegtagg etttegaegt geegagegag catagaggea 9840 9900 189 ategecaege egacagggaa aggagtagtg gegaegeegg ttteeagtge egaataegee 190 agtccttgct gcagaaagat cacgaacacc aggaaaaaac cctgcagcgc cgaatagaac 9960 191 accgacacgg acaaggcgcc caagatgtag tcgcgatggc tcatcaggta gatcggcagc 10020 192 agggccgggc gcgccaagtg ggcttgccga cgttgccagg cgacgaaggc caccagcagc 10080 193 ggaataccga gcgcaatggc tgcaaagcac catagcggcc agccgtatgc gcgtccttct 10140 10200 194 attagtggga acaccaggca caacaaggcg agcgcggcca gggcgatgcc gacccagtcg 195 ttatggatgc ccgcatgcgc cggcaccttg ggcacccaga tggcggccgc cagcaaggtc 10260 196 acgaggccga tcggcacgtt gatcaggaag atcgcgcgcc agccgacgcc gaacgcatcg 10320 10380

Input Set : N:\RJAVED\10531351.txt

Output Set: N:\CRF4\08112006\J531351.raw

100			aaaaaaataa	++		aaaaataaaa	10440
			cgcgcgctcc				
			ggctgcggcc				10500
			ggcgcagaac				10560
			gccgagcatg				10620
	-	_	tatcgctacg				10680
			cagggcgaca				10740
			gatcatcgct				10800
			cggcataccc				10860
			cgcttcagcc				10920
			ctggaaggcg				10980
			catcgcctcg				11040
			ttccagtcga				11100
			ttgatccttt				11160
211	actttcgcca	gggcatcctc	gtgcatgtac	aggctgaaat	ccggcgcaag	cgccaccacg	11220
212	gcgcgcacgc	gcggatcagc	tgtgaccggc	acggccctga	tcggtacccg	attttgtcgc	11280
213	accagcgcgg	tccaggcggg	ttgttcggcg	tgttccgggc	gatgcgcaaa	atcgaccatg	11340
214	aaaccggtat	gcggttcgcc	cccggcgatc	gctaaggcgg	tgtagccgcc	gacggagtgg	11400
215	ccgatcaccg	ctacgttatg	ggcctgaatg	gcaggaccga	actgcgcatg	gccggtgagc	11460
216	gtatcgatca	ccgcgcggat	gtgccggggg	cggtcttcca	gattctgata	gctgtattcc	11520
217	agctgatgct	ggaacaggtt	gtcgcccgga	tgctccggca	aggcgacgat	aaagccgtgc	11580
218	cgtgctaggt	aatgtgccag	cgtgcgaaac	actaggccgg	cgctgcgcgt	gccgtgcgag	11640
219	atcaccgcta	gcggaaacgg	gccggcttcg	atcggcgcgc	ccagggccac	gtccagcgta	11700
220	taaggtccca	tcgccgtatc	ccgtgaaggc	gtggcggtgg	gatacatcac	ccacatcggc	11760
			atcggtttcc				11820
			aaaaacgcgt				11880
			ccaaacagcg				11940
			atcctgcggc				12000
			gccatctaag				12060
			cggcagctgt				12120
			gatagcgccg				12180
			aggtgcggtg				12240
			ttcgagcttg				12300
			ctccgaaacg				12360
			ctgaacgact				12420
			ggtaatctcg				12480
			cagaggttcc				12540
			ggtcaccgct				12600
			cgatagccag				12660
			gccactcatg				12720
			gatcagcaga				12780
			gtgctccagg				12840
			ggcgttttct				12900
			cggcacgcac				12960
			tggcggcatc				13020
			ccactcgctg				13080
		_	ttcgctgggg				13140
			cctgaccagc				13200
			gccgcgctgt				13260
			atccgctgag				13320
240	cyayeccyat	Jungicyaly	accegacyay	ccacggcacc	cyguccucty	aacageegea	13320

VERIFICATION SUMMARYDATE: 08/11/2006PATENT APPLICATION: US/10/531,351TIME: 10:56:01

Input Set : N:\RJAVED\10531351.txt
Output Set: N:\CRF4\08112006\J531351.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date

. . . .